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THE CAUSE AND PREVENTION OF CANCER.

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A review of the literature of the past year will convince the most skeptical that a definite and substantial gain has been made in our knowledge of cancer. Stimulated by the excellent results that followed a scientific study of the prevention and treatment of tuberculosis, the cancer problem has become a subject of popular interest and is receiving more attention than ever before. The work of scientists and investigators is being carefully followed by an anxious public, who at last realize the importance and necessity of solving the cause, and means of eradicating a plague that claims more victims than any other disease.

Ewing in a recent article in Collier's, says: "In cancer research, ten years of the experimental study of the transplantable cancers of mice, rats and dogs have brought more progress toward a rational cure of the disease than the thousand years immediately preceding. Dogs have already been cured of cancer without the knife, but man must wait his turn."

Bashford writes: "Experimental investigation is rapidly advancing toward a stage at which the nature of cancer will be made clear, the influence of heredity and chronic irritants defined; but a cure is not yet in

sight. The only hope of the cancer patient still lies at present in the general practioner being so suspicious of all lumps that cannot be explained, that he will urge their removal as early as possible, and have them examined by skilled microscopists. Here I would enter a protest against the snipping out of a little piece for diagnostic purposes, for experiment has shown how great is the danger of dissemination of cancer cells in the individual where they are 'at home;' however difficult it may be to effect the transference of a cancer from one mouse, rat, rabbit or dog to another, the attempt always succeeds if the same individual be inoculated with his own tumor."

Bertillon, of Paris, states that cancer is more frequent in the northern countries of Europe (England, Norway and Netherlands) than in the center of Europe, (Prussia, Austria and France) and much more rare in the countries bordering on the Mediterranean. (Spain, Italy and Algeria). It is increasing in all countries without exception, while in England it has almost trebled in fifty years and causes almost as many deaths as tuberculosis.

Private philanthropy has always been slow to contribute to cancer study because of the apparent hopelessness of the disease, with the result that research workers have been seriously handicapped for lack of funds.

The ancient belief that cancer was absolutely incurable extends back to Hippocrates, 400 B. C., who wrote, "It is better not to apply any treatment to deep-seated cancer, for, if treated, the patient dies quickly, but if not treated they hold out for a long time."

New research laboratories are being constantly established by public-spirited citizens, cities and states throughout the civilized world. The work of Crile of Cleveland, Bloodgood and Cullen of Baltimore, Bainbridge of New York, Gaylord and Cowles at the New York State Cancer Laboratory, Buffalo, and Bashford, director of the Imperial Cancer Research Fund of England, deserve special mention.

Cancer is found in all vertebrates and all races of mankind. It is probably more prevalent among domesticated than wild animals, and is undoubtedly on the increase both in man and vertebrates.

Bashford states it is as frequent in India as in England, irrespective of the vegetarian diet of the Hindoo.

The United States census shows that one woman out of every eight, and one man in every eleven who reach the thirty-fifth year, die of cancer. It is estimated that there are eighty thousand cases of cancer in the United States at present and forty thousand deaths annually.

The death rate is higher in country districts and small towns than in cities. The mortality is also greater in those who work outdoors than in the sedentary classes.

Two fifths of the fatal cases in women involve the breast and uterus, and another two-fifths the stomach, liver and intestines. In men it is more frequent in the mouth, throat, stomach and intestines. This may be due to chronic irritation of these sites from differences in habits.

Bashford says that the sites of predilection show the existence of en

dogenous factors aside from irritation, that is, innate peculiarities of the organs involved.

Any part of the normal body may acquire cancerous properties. Cancer is not transmitted by heredity, but there is the possibility of the transmission of a predisposition. Most authorities believe cancer is infectious; thus it is known to be more prevalent in certain localities and houses. Cancer is no longer believed to be due to a parasite. Park believes that cancer is a specific disease, intensely infectious and transmissable, being caused by an extrinsic agent.

Bashford, Gaylord and other workers have grown thousands of cancers in mice by placing healthy animals in a cage with one suffering with the disease. Bashford states that infection plays no part in the experimental transference of cancer; it is a true transplantation of living cells.

Cancer occurs in epidemics among fish as well as mice and rats. In fish the infectious agent is supposed to be in the water, as healthy fish introduced into an infected hatchery contract the disease.

Bashford and Murray found that a few drops of blood from a normal mouse injected into the circulation of a mouse to be subjected to cancer grafting, prevents the graft from being successful.

Ehrlich and Clowes have independentiy demonstrated the difficulty of double inoculations. Mice were inoculated at the head with a very virulent tumor; after the tumor began to grow the mice were inoculated at the tail with the same or a more virulent tumor strain which took in only five per cent. of the cases, whereas the controls showed over ninety-five per cent of tail tumors. This phenomenon suggests to them the probability of the existence of powerful immune bodies in the serum.

When a mouse tumor reaches a certain size it is absolutely impossible to inoculate at a second point. Mice which have spontaneously recovered from a tumor are not reinoculable with the same strain. The larger the tumor from which the mouse recovered spontaneously the greater the difficulty of reinoculation. A natural immunity to cancer is found in some animals. Blood from immune dogs has been transferred for the cure of dogs with sarcoma. No cancer has yet been transplanted from one species to an individual of another species.

The extension of cancer may take place by direct infection of the surrounding tissues, but it is usually through the lymphatics or blood vessels

Bland-Sutton states: "The more carefully tumors are investigated, the more obvious does it become that the borderland between the malignant and innocent species becomes less easily definable."

The precancerous stage is usually manifested by an ulcer which heals, leaving a scar with thickening and slight redness. While the treatment of precancerous states and innocent tumors is easy, safe and effective; the treatment of developed cancer is today the most difficult problem of surgery.

Ewing says the only hope for the cancer patient is an earlier resort to the operating surgeon and more frequent submission to the knife; it is

doubtful if this prospect has been any more abhorrent to the patient than to the surgeon.

Paget and Billroth claim that one-fifth of all cancer can be traced to an injury of some kind. The chief reason for the development of cancer in the later years of life is the lack of resistance consequent upon the physiological changes in the body tissues. Young people are less liable because their body cells are vigorous, resistant and growing rapidly. However, when cancer once gains a foothold in youth it grows faster and is more fatal than in middle or advanced life.

In animals, as in man, cancer is associated with certain periods of life, being more frequent as age advances.

Cancer occurs in every race, and its greater frequency in certain countries is more from irritating influences than any peculiarities of climate, soil or diet. The occurence of cancer at certain sites in different races is due to habit and is determined by external irritation.

Cancer of the mouth, "tobacco cancer," is rare among American and European women, but is common to men. In India and Ceylon, where the women chew betel nuts, cancer of the mouth is very frequently seen, beginning on the cheek opposite the teeth of the lower jaw. Lip or pipe cancer is usually found in men and is due to the heat and irritation of the pipe. In Turkey, Palestine, Algeri aand Morocco where cigarettes are smoked excessively, cancer of the mouth is said to be rare.

Cancer of the skin of the abdomen, a rare condition, is common in natives of Kasmir, who wear abdominal charcoal heaters next to the skin.

Visible cancer is frequently preceded by chronic irritations; smoker's cancer of the lip, mouth and tongue. As friction of clothing or implements required in certain occupations. From picking warts and moles. Irritation of nails in the mouths of lathers. Irritation of broken teeth or tooth plates. Irritation of soot in chimney sweeps. Irritation of cuts and fissures of the lips. Old warts and scales on the face. Burns from the x-ray may be followed by cancer. Gallstones are usually found with cancer of the gall-bladder. Cancer of the stomach is usually the result of an old ulcer that has existed for months or years. Calculi are often found with cancer of the kidney and bladder.

A soft cancer is more toxic and grows faster than a hard one. There is a varying degree of malignancy, some growths tending to occur and return after removal more readily than others. A single injury is more liable to cause sarcoma than carcinoma; carcinoma is more likely to follow prolonged irritation. An injury may call the patient's attention to a pre-existing cancer.

McGraw says: "Surface cancers are largely due to injuries, chronic irritations, inflamations and ulcers which destroy the resisting powers of the tissues and stimulate the development of cancer germs. The neglect of such troubles, therefore, especially in persons of middle or old age, may result in disaster. We should, therefore, see to it that men and women approaching

middle life are cured of such troubles. Uterine lacerations should be repaired, gallstones removed, gastric ulcers operated upon, chaps, indurations and ulcers of the mouth excised, thereby preventing cancer development in such localities. Because of their liability to develop into cancer, tumors of all kinds shoud be excised."

A tumor that is increasing in size or returns after removal should be looked upon as probably cancer, no time should be lost in thoroughly excising all of the suspicious mass and submitting it to a skilled microscopist for a positive diagnosis.

The earliest symptoms of cancer of the uterus usually appear near the menopause and the increased watery discharge and occasional presence of blood are considered part of the "change of life" by most women and as a consequence, disregarded. It is a common belief that all sorts of irregularities are to be expected at this period and often valuable time is lost in diagnosing and treating the cancer while it is curable.

Because of the extreme liability of women to this form of cancer, the symptoms of the precancerous or first stage of uterine cancer should be known to every woman.

1. Leucorrhea, if not previously present, or if existing, becomes more profuse, watery and irritating.
2. Loss of weight, if no other cause is apparent.
3. Pain in the back or side.

Cancer is a local disease at first, and if promptly treated can usually be cured. The only hope for a cure is to secure early and complete removal. Medical treatment at the best only gives temporary relief and is always dangerous because of the valuable time lost. Bainbridge demonstrated that the enzyme treatment for cancer proposed by Beard, of Edinburgh, does not inhibit the growth, prevent metastases nor cure cancer.

The cases of cancer treated by Hodenphyl with the serum from patients who had spontaneously recovered from cancer, have all died.

Gaylord says: "That the x-ray, either directly or, as would appear, indirectly robs the epithelial cell of the factor which causes its unlimited proliferation, and leaves the normal epithelial cells unaffected, is shown by the interesting experiments on warts by Perthes.

Perthes has clearly demonstrated that the dose of x-ray required in the treatment of cancer, or for the removal of warts, does not injure directly the normal epithelium or the epithelial cells of the tumor. If the tissues surrounding the tumor are overdosed a so-called x-ray burn may be induced, but this is an injury entirely independent of the ideal therapeutic activity of the agent. Perthes has shown by sections of a wart that has been properly dosed, frequently with one treatment, will thereupon undergo a process of retrogression, in which all of the cells forming the wart become hornified, with the exception of those of the deeper or germinal layer; and these promptly proliferate and produce, not a new wart as before, but normal new skin to repair the defect. If the dose is not sufficient the super-

ficial cells will undergo hornification, the wart will reduce in size, but the cells of the deeper layer will again proliferate and produce a new wart. This proves conclusively that the x-ray does not act through any form of injury to the cells themselves. It removes from them the tendency to proliferation which produces the wart, and leaves behind, in the necessary cells of the germinal layer, normal uninjured cells which are capable of producing new and normal skin."

Chas. Ryall, of the London Cancer Hospital, (quoted by Bainbridge), says, cancer cells may escape during operation as the result of incising or lacerating the primary growth, cutting across or tearing an infected lymph vessel, or even from rupture of a cancerous gland, and such cells getting into the wound are quite capable of causing and do frequently cause, cancer recurrence. In the parent growth, the cells are more or less encapsulated in fibrous tissue, but some cells escape during operation and find a resting place in the wound which is comparatively unprepared to meet and resist the invasion.

Bainbridge states if nature's barriers have already been broken down by ulceration a section in some cases may be removed from the surface without doing harm; but in cases of doubtful malignancy, where nature's barriers are intact, do not incise the tumor for the purpose of removing a section for microscopic examination—remove the tumor and make the microscopic examination afterward. If two mice, each with a mouse tumor, are placed under as nearly uniform conditions as possible, if one is incised and the other not, and at the expiration of twenty-four hours each tumor is removed, the mouse in which the tumor is incised in a high percentage of the cases dies from metastatic involvment, whereas the mouse that was left alone usually recovers and is free from metastases.

As a rule, a cancer of the uterus that can be diagnosed by the history of a profuse or bloody flow for several weeks, or if a tumor can be felt, has progressed beyond the border line between possibility and impossibility of cure. General malnutrition as well as diminished vitality of the noncancerous tissue in the neighborhood of malignant disease, as a rule, tends to increase the rapidity of the local extension and render more liable the development of metastases.

Upon the appearance of any of the previously mentioned symptoms of cancer, a woman should immediately seek her physician and insist on a thorough examination.

Cullen asserts that any bloody or watery discharge that cannot be definitely accounted for, demands an immediate and careful local examination.

If there is the slightest possibility of cancer existing she must lose no time in consulting a surgeon. Even in the earliest stage the only chance for a cure is an operation while it is still possible to remove all of the cancerous tissue. While still local it causes little discomfort and no loss of weight. Horsley of Richmond, states that cancer of the breast never causes pain in the early stage of its growth,

Serious symptoms of uterine cancer rarely appear before it has become inoperable. The cachexia appears late and is due to the poisoning of the system by the cancer toxins and at this period the cancer is practically always incurable. In fifty per cent. of the cases where the operation is done four weeks after the appearance of symptoms the cancer has spread beyond the uterus. A very small per cent. are cured after four months' bleeding.

At the John Hopkins Hospital there were only forty-three per cent. of recoveries following the most thorough operation where there was no auxillary involvment; of the cases with auxillary involvment only twenty-five per cent. survived the three year limit; while those with cervical inualuement only seven per cent. lived over three years.

Handley, of Middlesex Hospital, London, was one of the first to emphasize the importance of removing the deep fascia of the breast to prevent cancer return. Butlin, of London, reports only twenty-one per cent. of the operations for cancer of the tongue are successful. Forty per cent. of the cancers removed from the face and skin by operation are followed by recurrence of the growth.

Handley propounds the following law of cancerous growth: "Every aggregation of carcinoma cells has a definite life cycle, and ,after, increasing in size for a varying period at a varying rate, tends spontaneously to undergo fibrotic and degenerate changes. These changes extend from the center of the mass centrifugally to its periphery, lead to its shrinkage, and terminate in the replacement of the aggregation of cancer cells by a fibrous scar.

We do not cure cancer, we remove it; and, as a rule, when every cancer cell cannot be removed it is not curable.

Andrews says the risk of recurrence in malignant growth increases as the time of the square of the growth. This is the accepted rule of cancer growth and forcibly illustrates the extreme importance of an early and complete operation if the patient's life is to be saved.

The cancer mass should be kept clean by frequent dressings with antiseptics, either lotions or powders. The fetor is usually due to an infection with pyogenic micro-organisms and not to the cancer per se.

Bainbridge says the lotio pancreatitis applied locally clears the ulcerating surface by removing organisms, thus aiding in diminishing an absorption of their products. The injectio trypsini in some cases, causes a rapid disintegration of cancerous tissue in the center of the tumor while periphery continues to grow.

All dressings used on cancer wounds should be burned and the most scrupulous cleanliness observed by those who are brought in contact with cancer patients who require frequent dressing of foul, fetid or sloughing tumors.

DISCUSSION.

Dr. Lain, (Oklahoma City.)—This paper is of too much importance to my mind, to be passed unnoticed. The doctor's paper is a most excellent

paper to my mind. It shows a great deal of study and collection of statistics and investigation. It seems a little strange to some of us who have made some special study along this line why the general practitioner does not give more attention to the subject concerned. This disease is the cause of the death of from nine to twelve per cent. of the deaths occuring after thirty-five years of age. No other disease, I believe, in which the death rate is so great as this excepting one and that is tuberculosis.

Perhaps many of you who have been practicing in Indian Territory or Oklahoma have not had your attention called to the fact if it is true, as asserted by a man engaged with the government medical service last year, that out of a collection of thirty-odd cases as reported by the agents, only twenty-four cases of cancer were reported. Out of this number some twenty were questionable. Possibly ten per cent. or fifteen per cent. of this number might be syphilis or tuberculosis. Then I say the American Indian seems to be almost immune to cancer. What does this mean to us? It may mean a great deal. Why is it true? If we study his habits, the character of his skin, we may discover something of value to us in this line. I am now endeavoring to collect statistics on this line and within another twelve months I am going to have some statistics on it. I am visiting the Indian schools and making personal inspection of every so-called cancer among the Indians, and in no case so far have I made a diagnosis of cancer in an Oklahoma Indian. Can you find such a record among our race? We cannot. Then I say, gentlemen, study the Indian. It may be that the outdoor life of the Indian, not only the sunlight, but his fresh air may have something to do with it. It may be because of his skin being of such thickness that it is not susceptible to this disease, whereas he is very susceptible to other diseases. If any of you have any statistics along this line, I will certainly appreciate it, and I will make a special trip to see your Indian.

Dr. Watson—I hope that Dr. Lain's investigations will clear up the question of the absence of cancer among Indians.

JOINT MANIFESTATIONS OF HEMOPHILIA.

DR. C. S. NEER, VINITA, OKLA.

The frequency of joint lesions in hemophilia has been recognized for many years. The early writers regarded them as manifestations of gout or rheumatism. Volkman, in 1868, showed that hemorrhage into joints in hemophiliacs frequently results from a slight trauma and since that time the hemorrhagic nature of these joint swellings has slowly come to be well recognized. Koenig's able paper published in 1892 was an important factor in securing a general recognition of the true pathology of this condition, and in emphasizing its importance.

Koenig divided the symptoms of these cases into three stages: (1) The stage of hemarthrosis, in which there is simply free blood in the joint; (2) the inflammatory stage, in which occur thickening of the capsule, deposi-

tion of fibrin and beginning degeneration of the articular cartilage; (3) the stage of contraction and ankylosis.

Large or small joints may be affected but the large joints, especially the knee, are most frequently involved. Among thirty-two cases collected by Piollet, the elbow was involved six times, the ankle twleve times, and the knee in every instance. In many of the reported cases, the first attacks have occurred in childhood. As a rule the condition does not occur in females, but a few exceptions to this have been reported lately.

A slight trauma is the common exciting cause of the hemorrhage. Considerable swelling may occur within a few minutes. There is only a moderate amount of pain and very little tenderness. There is often a slight rise of temperature. Sometimes the trouble does not progress beyond the first stage, the blood being absorbed and the function of the joint being restored. Repetitions of the attacks are likely to result in permanent changes in the joint, although Goelet has reported a case in which the patient had more than forty-five severe hemorrhages in the right knee. The blood in each instance had been quickly absorbed and but slight impairment of function had occurred. The left knee was contracted after having been the site of forty hemorrhages, all but the last one having been well borne.

If the blood is not absorbed the joint enters upon the second stage and presents a condition resembling tubercular arthritis. This terminates in the third stage in which the joint cartilage becomes eroded and the joint cavity may be entirely obliterated.

In the diagnosis of this condition the history of the patient is of the utmost importance. Any joint affection in a patient with a history suggestive of hemophilia should be looked upon with suspicion.

The first stage has been mistaken for rheumatism and for tubercular hydrops, but it is more apt to be confused with acute synovitis, for the joint effusion often follows a trauma. Gonacoccal arthritis and intermittent hydrops must also be excluded. The second stage almost perfectly resembles tubercular disease of the joint. Hemophiliac joints have several times been operated upon as tuberculosis, with a fatal result in every case. It is of interest to know that Koenig himself twice made this serious mistake.

In the third stage, the ankylosis, flexion and atrophy may present an appearance indistinguishable from that of tuberculosis.

The treatment in the first stage should be directed to the absorption of the effused blood. A snug bandage over elastic cotton should be applied to the joint. Some movement should be allowed as this hastens absorption Ryerson recommends aspiration of the joint with a fine needle, and the injection of a few cubic centimeters of adrenalin solution. Constitutional treatment by drugs such as gelatin, adrenalin and calsium chloride should be tried, but the result of such treatment is uncertain. In the latter stages it may be possible to straighten the joint by traction, after which a splint or cast should be applied for a time. Any cutting operation should be absolutely avoided.

XUM

Following is the report of a case which occurred in my service in the St. Louis City Hospital. A report of it appeared in the Journal of the American Medical Association in June, 1907.

PATIENT—H. C., male, age 28, entered hospital October 22, 1906, on account of a swelling of the right knee. At the time of his entrance his temperature was normal and he could walk with little inconvenience.

HISTORY—The father of the patient was living and healthy. The mother died of some lung affection. Three brothers and three sisters were living. All of these were said to be healthy with exception of one brother, who, it was learned, beyond a doubt, was a bleeder. One paternal uncle died of some obscure abdominal trouble. No history of hemophilia in the grand parents could be obtained.

Patient used alcohol somewhat excessively, and had been a bartender in a saloon for a year and a half. When a boy he was subject to attacks of "rheumatism," sometimes articular, sometimes muscular. He had the usual diseases of childhood, and had malaria several times. He denied syphilis, but admitted having had gonorrhea several times. In 1899 he had what he called a dysentery. He passed blood from the rectum, but the passages did not cause pain. He was in a hospital in Dakota two months at this time, bleeding at intervals. When twelve years old he received a small cut over the right eye which bled more or less for two weeks in spite of all efforts to stop it. Ever since he had noticed that a small cut bleeds persistently. In 1904 he was in a hospital with a scalp wound and the bleeding was stopped with difficulty. A little later he cut his finger and thumb with a pane of glass and was obliged to enter a hospital, where the bleeding continued several days before it could be stopped. In July, 1906, he fell and bruised his right knee. It soon became swollen and somewhat painful, but he did not go to bed on account of it, and in two weeks the swelling had largely disappeared. There was no history of hemoptysis or of hematemesis, but he had had persistent nose-bleed several times, which on one occasion, necessitated a plugging of the nostril for its control.

PRESENT TROUBLE—On the evening of October 13, 1906, patient accidentally struck his right knee against a box. There was but little pain at the time and he slept well that night. The next morning he noticed a sense of stiffness in the knee and after walking on it for a short time discovered that it was swollen. The swelling was still present on his admission to the hospital two weeks later.

PHYSICAL EXAMINATION—The thoracic and abdominal organs showed nothing abnormal. The reflexes were normal. The urine was clear with a specific gravity of 1028, and contained no albumin, sugar or casts. The right knee joint was enlarged and evidently full of fluid, the swelling being fluctuant and corresponding to the extent of the synovial membrane. On the right side of he external condyle of the femur was a small ecchymosis, marking the point of injury. The knee was very slightly tender to pressure and was somewhat warmer than the left one The patient's tem-

perature at no time went above 101, and was usually below 99. There was little complaint of pain and the functional disturbance of the joint was slight.

The diagnosis of hemarthrasis was made, based upon: (1) A clear and well substantiated history of hemophilia, one brother also being a bleeder; (2) the occurrence of a well-marked swelling of the knee joint, following a slight trauma, with scarcely any tenderness, and but little pain, fever and functional disability. The treatment consisted in bandaging the swollen joint snugly with elastic cotton, and the administration of small doses of potassium iodide and an occasional purge. The man made a good recovery, the swelling disappeared completely and he left the hospital in less than a month with the knee practically well.

The subsequent history of this patient is of some interest. Two months after leaving the hospital he returned with symptoms which were at first attributed to gastritis. He vomited considerably, was constipated and intestinal obstruction was suspected. Three days after admission his pulse became extremely weak and frequent and the vomitus had a fecal odor. There was no pain and no destention of the abdomen. The patient was evidently in a dying condition and an operation was advised as offering the only chance. His relatives, who knew very well his tendency to bleed, finally consented. Upon opening the abdomen the peritoneal cavity was found to be filled with bloody fluid. Almost the entire intestine was of a dark red color like that of beginning gangrene. The mesenteric vessels were engorged. No explanation of the cause of the condition was found in the belly. The man died within three hours after the operation. A post mortem was not obtained, and in its absence we did not feel quite sure of what the condition was which caused his death. The appearance of the bowels and mesentery at the operation suggested the possibility of a sudden portal obstruction. However, in view of the man's previous history, the presence of blood in the abdominal cavity, as well as some of the symptoms he presented during the last day or two of his life, it seems very probable that hemorrhage was an important factor in producing his death.

DISCUSSION.

Dr. LeRoy Long, McAlester—I wish to ask the essayist what he knows about blood serum. Dr.————, of Chicago, advises blood serum. I was in his clinic one day and he demonstrated its use. He obtained it from the aorta of a rabbit, and gave it to a patient. He stated that where blood serum could not be obtained the physician would get good results from ordinary antitoxin—diphtheria antitoxin.

Dr. Neer, closing—Replying to Dr. Long, I have had no experience in the use of blood serum for hemophilia, but know it is now used.

A LOOK AHEAD.

DR. A. K. WEST. OKLAHOMA CITY.

The status of the physician and his profession in the realms of culture is in no sense immutable, but subject to those evolutionary and revolutionary changes showing the effects of any new cause hitherto inactive. While in a general way the present status of medicine, its relationship to society and to the State, has been a slow, gradual development, affected by numerous causes, new discoveries in science, the favorable or unfavorable attitude of the government, in fact, a multitude of causes more or less important—yet there stand out in the history of medicine two epoch-marking periods, namely, the period of Hippocrates, that golden period of Greek history, accentuating as it does the very crest of a wave of culture which has possibly never been surpassed in the history of the human race. It is no doubt an error to attribuate or to credit Hippocrates solely with the revolution in medicine with which his name is associated. The assence of this cause, this discovery, usually attributed to the father of medicine, is that disease is not supernatural, is not a visitation of the wrath of the gods, but a natural phenomenen to be studied prevented, or cured, by the rational use of material agents; that prayers, sacrifices, incantations, dreams, etc., had no place and were of no value in preventing or healing disease. The effect of this new conception let us note for a moment.

From the earliest times—with the very dawn of legend—the healing art in Greece was monopolized by the priests of Esculapius who attended the temples dedicated to the god of healing and officiated as propitiators between the luckless invalid and the wrath of the gods. To be brief, this was the practice of medicine in Greece until the Golden Age. But with the widespread acceptation of the Hippocratic conception of rational medicine, the temples Esculapius began to fall into decline, the people no longer made pilgrimages to the temples, they no longer depended upon sacrifces and incantations, but under the teaching of Hippocrates and his immediate followers, medicine, from having been a pure superstition, rose to a rational art. The family physician took the place of the priest, and with certain modifications the status created by Hippocrates and his period has continued down to the present moment.

The next great epoch in medicine and one of the two, was a discovery as far-reaching in its significance and destined to alter the status of medicine as a profession almost as profoundly as the teaching of the Greek fathers. No one man can make claim to be the discover of the germ theory of disease although credit must be given to Louis Pasteur more than to any other man; however, this is unimportant for the purpose of this paper. No matter to whom the credit is due, it is now a conceded fact that instead of—as was believed by the rational school of medicine and by the most enlightened, until past the middle of th 19th century—disease being due to, and caused by, the influence of climate, of season, of poisonous gases, general telluric and atmos-

pheric conditions of uncertain kind, that at least a great portion of the ailments of humanity, certainly all of the epidemic and contagious diseases; indeed, the major portion of the ills of humanity, are due to parasitic microorganisms which enter the body, grow and develop at its expense.

To recapitulate in a few words—these are the two great epochs: The discovery by Hippocrates and his age that disease is not supernatural. The second epoch that the natural causes attributed by Hippocrates in the place of the supernatural, are of comparatively little importance, and the growth and multiplication of germs are the cause of most of the phenomenon spoken of as disease.

Well, what effect will this new conception have on the status of medicine? First, it necessitates a change in the usual classification, usual placing of medicine as a department of culture. The old classification that medicine is one of the learned professions, nearly allied to theology, law, philosophy, etc., must give place to the conception of medicine as a department of the science of biology. From the domain of pure reason and deduction, it must be regarded as being experimental and inductive. As a natural result of this new truth, profound modification must occur and is even now beginning to be noticeable in state medicine, in medical education, especially touching sanitary science and materia medica. And I further believe—though evidence of this is not at this time apparent—that the relationship of physician to patent, and especially, our present fee system, must undergo some sort of readjustment.

To take up the first of these modifications—State Medicine. It is apparent even now that the educated public are beginning to awaken to the vast possibilities of applying the new scientific medicine to the prevention of disease. There seems to be little question but that in a few years a national department of public health will be installed. In the platform of both of the dominant parties prior to the last presidential election was a plank endorsing this idea. A bill was early introduced by our own Senator Owen, which failed of passage, and with some slight modifications has been introduced at the special session of Congress, and while it may not pass at the present time the ultimate success of the propaganda can hardly be questoined. This move is also clearly noticeable in practically every state of the Union, being evidenced by the larger powers of health boards, more stringent laws regulating the practice of medicine, more careful attention to water supply and sewage disposal, indeed to all those conditions which are known or believed to play a part in the dissemination of disease throughout the country. Notice that all of this activity looks toward the prevention of disease and has nothing to do with its cure, so that the recognition of the possibilities of preventive medicine is one of the factors which must modify our status in another direction, this will be mentioned later.

Our whole medical educational system will have to be builded almost from the ground up. The whole system of deductive lectures, the handing down from generation to generation, of theories, of hypotheses, no matter

how plausible or how backed up by experience and authority, fails to come up to the standard demanded in the teaching of a pure science. The medical student of today is not expected to familiarize himself with the opinions of others and that only, but he must verify these opinions by actual experiment on his own account. Therefore, the education of the medical student consists very largely in the equipment, the manning, and the scientific use of a specialized biological laboratory. This means immensely increased expense in educating men in the medicine of today. The period of the privately owned medical college, maintained by revenue from tuition only, is rapidly drawing to a close. Likewise the period of the self-made or self-educated physician. The preliminary education required in addition to the amount of work necessary to complete the present medical course, which is indeed far from covering the whole possible field of medical science, makes it practically impossible for a man to earn his living and a diploma in medicine. It would seem, then, that the profession of medicine of the future must be filled by the sons of wealthy or well to do, and the poor boy who has to make his own way must be satisfied with some other field of activity. This indeed would be the result, and will be the result, unless some change occurs by which real talent and power are assisted to entrance in the professional field. This change must and will come. My own experience has led me to believe that the son of the wealthy and doting father, who has all his expenses paid through the preliminary and medical course, in most instances profits no where near the amount of his possibilities.

A few weeks ago, in an address by President Vincent of the University of Minnesota, attention was called to the necessity of careful watching and combing, as he expressed it, the preparatory schools of the country, for boys and young men of character and ability, stating that some provision should be made for the systematic hunt of such material and a system of scholarships arranged by which these youths should be educated at the public expense.

This is only one suggestion, and I have no time at present to outline any system in detail, only to call your attention to the fact that some change is necessary and will come about. There will be a time and that at no distant date, when brains and ability will be assisted, and when mediocrity and worthlessness will be barred from the profession, no matter how much money is behind the effort to back it.

We have something like this in our method of selection of men for the army and navy, and in my opinion a system of medical schools, owned either by the state or federal government, to which admission is gained by competitive examination only, and men allowed to continue only upon condition that their lives and character of their work justifies the state's expense in their behalf.

In connection with the future institution of medical education there will be not only the hospital for the study of the treatment of disease, but there will be the research station in which the etiology, pathology and dissemination of disease will be studied in the same manner.

In the medical school of the future there will be a profound change in the teaching of materia medica. Physiological and pharmaco-dynamics will play an equal part with therapeutics. Experimental therapeutics may not sound well, but if we would really know the power of agents in healing disease—the real part they play—there is only one way to know with certainty, that is, by actual error-eradicating experiment. It is a significant fact that the present council of pharmacy and chemistry of the American Medical Association have suggested the trimming down of the list of names in the materia medica, which may be properly used in examining before state boards from about fifteen hundred to one hundred and fifteen. While talking recently with a member of the council, he assured me that in his opinion the list was even then entirely too large. I may be regarded by some of my fellow practitioners as a therapeutic nihilist, but I am fully convinced that the physician armed with complete knowledge of th e dynamic possibilities of a score, or less, of medicaments, will be a far more efficient therapeutist than the average of us who are practising medicine under the old regime and the old methods of education.

Now, as touching our relationship to our patients and our fee system. It is quite possible that right here a controversy may be started. However, be careful to defer judgment until you have looked at several sides of the question. If preventive medicine is to constitute an important work of our profession in the future, and we must allow that some of the most brilliant and valuable discoveries of the past few years have been in this field, and we must also allow that it is better to prevent disease than to cure it; if we can prevent smallpox and yellow fever and malarial fever and diphtheria, is there any reason why, in the course of time, we will not master all of the infectious diseases after the same manner? What, indeed would be the status of the physician in a community where there were no epidemics and no infections? Notice, our whole fee system is based on **curing** disease; we are not paid for preventing it. If you treat a family of a half dozen through an attack of smallpox a usual and ordinary fee under our present system would be, at least, several scores of dollars. If you prevent the family next door from having smallpox, by vaccination, they feel that five dollars is a large charge for the service.

With the advance of medical science, as noted above, the posssible advance, when most of our diseases are under control and preventive medicine constitutes a large part of our work, does it not appeal to you that it would be wiser that a fee system putting a premium on keeping people well, would stimulate the medical profession and would be better for the people, would be more desirable than our present system, which really puts a premium on keeping people in ignorance and keeping them sick as long as they are able to pay. It has frequently occurred to me that the medical profession as a whole display a great nobility of character and a high order of integrity that so few of them are prostituted by the present fee system. Very recently several men of national, and one at least of international, reputation as writ-

ers and thinkers have called attention to this very point. In one of Bernard Shaw's late publications he says it were as wise to have a judge who is financially interested in the outcome of litigation, and expect justice, as to expect the best results from a surgeon who is paid a large fee if he operates and nothing if he saves the patient an operation. Samuel Hopkins Adams, one of our American magazine writers, has recently touched upon the same subject. Woods Hutchinson, with whom I am acquainted and for whom I have the greatest respect, has also recently declared that the time would come when our fee system would be more nearly like that of the Chinese than the one now in vogue.

The object of this paper has not been to institute any innovations, but merely to outline possible and probable changes for the better which may be expected in the near future as a result of the last epoch-marking period in medicine—that of the germ theory of etiology.

DISCUSSION

Dr. Hatchett: I wish to say that his paper is very beneficial. I think the older we get and the more scientific we get the more interested do we become in these evolutionary problems. To my mind the question of evolution is a most enticing question. Evolution along all lines. I have in the last year read very carefully Hegels Evolution of Man. In my early training I didn't get a chance to study biology and I have waded through two volumes of Hegels Evolution of Man. I find that very interesting. I have also studied very carefully his ?? Universe. A man that is thorough in biology is generally a very proficient man. I appreciate Dr. West's remarks. I think a young physician should study along solid lines. Along lines of life that will be beneficial to him when he gets old.

Dr. Williams: I have not had the privilege for the past ten years to be in a mdeical college but I remember when I took my course in medicine the history of medicine was left a blank to us as students. In his paper the doctor brought out a point that seems to me as physicians we are going to consider. When we are doing as much as we are if the time ever comes that we are able to accomplish what we ought to, the matter of fees will have to be provided for and we will have to face about and devise some other means to raise them. I am glad to have that subject brought up because I think we will have to consider it in the future.

Dr. Bobo: I enjoyed Dr. West's paper very much. I know just how hew he feels along that line. He is taking an advanced step. I will not take up and discuss his paper as a whole but just refer to one point in his paper, and that is in regard to the point that Dr. Williams has just spoken of. The question of remuneration for services rendered by the physician for the benefit of the public good, the public health. In the past few years various organizations throughout the country have drawn upon the medical profession for certain advice in regard to public health and have made appointments and engaged the services of men who

are competent in that line to give advice to a community. And physicians have put themselves to considerable expense and trouble in filling those engagements and appointments without any remuneration whatever. I think the history of medicine has been one that has been more closely connected with true charity than any profession that the world ever knew. I dare say there is not a doctor in the State of Oklahoma that ever had to be asked to contribute his services to that of charity or for the betterment of the health of his community. He will do all the charity work and do it cheerfully and freely and as effiicently as he can without the asking; without any expectation of remuneration whatever. It is a pleasure to the true physician to help a fellow man whether he gets anything for it or not. But the trend, as the doctor says, is going where the physician's services are demanded and asked for without any consideration or remuneration whatever to deliver addresses to communities; to sometimes go before this society or that society and hold magic lantern shows and moving picture exhibitions and telling the people how they may get rid of those conditions and avoid those conditions. And nineteen out of every twenty that attend those lectures say that that doctor is there to boost himself, or wants to get himself before the community; he wants to show that he knows more than some other doctor; he doesn't get anything for it and really it is not worth very much and we won't consider it.

If the doctor is called upon to give advice to the people about how to preserve their health let him look at it from a strictly scientific standpoint and not seek those occasions to show himself and to demonstrate to the people that he has a superior knowledge of that specific subject, but let the people come to him. Sit in your office and in a dignified way and prepare yourself to do good work. Put in your time that you are studying to give to free lectures and prepare yourself to do work that can't be criticised, and when they want you to make a discourse say that an ordinary lecturer gets $100.00 a night for an audience of four or five hundred when he is instructing them in other matters and that your services ought to be worth as much for something that pertains to their lives and general health.

VARICELLA.

J. F. DUCKWORTH.

Varicella is described in most text-books as an acute, specific, infectious fever, characterized by successive crops of vesicles, distributed over the entire surface of the body, which disappear in from four to ten days by desiccation.

In the past two decades, however, a number of interesting observations have been made which prove that the ordinary conception of varicella is erroneous and that there may be and are, many complications which threaten life, that there are decided variations from the usual clinical picture, and what is of especial importance, it is very often confused with small-pox. These points I care to discuss very briefly. Varicella has usually

been considered a disease of childhood only, and some authors have gone so far as to speak of immunity in adults, and have given that as a point in differential diagnosis from small-pox, but during the past few years, there has been such a large number of cases in adults, in places which have remained free from small-pox, that the question of the occurence of chicken-pox in later life is regarded as settled.

Here are some of the complications which may and do arise in varicella:

Nephritis is the most important of these. Unger has made the following classification:

1st. Latent nephritis in which there are no symptoms, and albuminuria is only discovered when looked for.

2nd. Light nephritis, in which there is marked albuminuria and some oedema, but no severe symptoms.

3rd. Severe nephritis with fever, marked albuminuria, anuria, cramps, gastro-intestinal disturbances, uraemia, etc.

In some epidemics nephritis is especially frequent, occuring after the vesicles have dried up, and it is important to note that a very severe nephritis may follow a very mild attack of varicella.

Arthritis varicellosa may occur during the eruptive period or later, and usually only one joint is affected.

It is divided into two forms:

1st. A simple serous form.

2nd. Severe suppurative form.

The latter may follow secondary infections by pus-germs and occur through general blood infection.

Complications involving the nervous system may follow varicella, as after the other infectious disease.

W. Gay (1894) noted a case of paraplegia, with loss of power, sensibility and reflixes of legs. Marfan noted a case of monoplegia, which affected the arm and also a case of external ophthalmoplegia of muscular origin.

Chorea, multiple sclerosis and encephalitis have also been observed. Secondary infections with pus-forming bacteria are important. In some cases most of the vesicles may become infected and become pustules. Local inflamations, as phlegmons, boils, abcesses, and erysipelas may occur.

The following have also been reported as complicating varicella:

Osteomyelitis, gangrene of both legs, suppurative Phlebitit, suppurative pericarditis, otitis media, meningitis, brain and lung abcesses. empyema and thyreoiditis.

Gangrene of the skin may be observed in the course of varicelli more frequently than in any of the acute exanthematous diseases. I had the fortune or misfortune, as you may see fit to call it, to attend a case of dermatitis gangrenosa, some six months ago, in a girl sixteen years old.

The condition being sequel to a mild varicella. Result—fatal after five or six days.

Varicella may predispose to tuberculosis in the same way as does measles.

One may have a patient with a latent tuberculosis and see that started into an active process, by a mild attack of varicella.

The appearance of the eruptions of varicella may vary from those resembling small blisters to confluent vesicles resembling small-pox, and we may find the variola-like varicella as well as the varicella-like variola.

These cases are exceedingly hard to differentiate.

Time, as a rule, is about all that will clear up the diagnosis, but in the meantime, the reputation of the physician and the safety of the community may be seriously compromised. The number of vesicles may vary according to Thomas from 10 to 800. The contents of the vesicles are not always clear, throughout the course, but may be either watery, milky, purulent or haemorrhagic, and secondary suppuration of the vesicles may occur and they may or may not be umbilicated. Constitutional disturbances may be absent, slight or very severe. The absence of scarring does not always differentiate varicella from small-pox, as some cases have left as many as 300 scars.

In irregular cases of small-pox the distribution of the eruption may be as general as in varicella, and may appear in crops.

In the last Berlin epidemic a diagnosis of chicken-pox was made, upon the appearance of the eruption in successive crops, but it was small-pox nevertheless, and varicella has been seen, in which, all the eruption appeared at once.

Varicella has usually been considered a harmless disease and little attention paid to it, but the unfavorable cases are of sufficient number to require us to guard against making an unqualifiedly favorable prognosis.

I have made no attempt to take up the history of symptomatology of the disease, or its mode of contagion, (for on this, we all agree, that we know nothing) but have tried to bring to our attention some things, which I think should convince us that varicella, that innocent and harmless disease, can rightfully demand of us, just a little more of our attention and consideration. Our own experience teaches us that the new-born infants and those children suffering from intestinal and lung diseases, and above all, tuberculosis children, may be made very dangerously ill with varicella.

THE EARLY DIAGNOSIS OF TUBERCULOSIS, AND ITS IMPORTANCE.

By P. H. Anderson, M. D., Anadarko, Oklahoma.

When we say that tuberculosis is a curable disease, we mean that those cases coming under observation early and receiving proper treatment are cureable.

If, before making a diagnosis of tuberculosis, we wait for the classical

sysptoms to develop, we have lost valuable time in the treatment, and will find that the great majority of them are already beyond hope of recovery

No factor in the treatment of tuberculosis is of more importance than an early diagnosis.

It would seem superfluous to make this statement were it not for the fact that comparatively few patients are placed under proper treatment during the incipient stage.

An analysis of the reports of the leading sanatoria of this country, reveals the fact that instead of a majority of the cases admitted to these institutions being in the incipient stage as is supposed, they are in nearly every instance in the minority.

This extraordinary condition of affairs is probably due principally to the fact that it is only recently that it has been demonstrated that tuberculosis was curable in any stage, while it is now generally understood, by the laity as well as the medical profession, that some cases of tuberculosis are curable, the limitations and conditions of the treatment are not generally understood.

It will then be the aim of this paper to add emphasis to that which is already known of the early signs of tuberculosis, and if possible, aid in bringing this class of cases under appropriate treatment while there is yet a possibility of recovery.

I will not deal with the demonstration of tubercule bacilli in the sputum, for it has been demonstrated time and again that they cannot be so demonstrated until the disease is well advanced in many cases.

He who always waits for the tubercule bacilli to appear in the sputum before making a positive diagnosis, loses the most valuable time for treatment, and is likely to come to the conclusion that but very few cases are curable.

The signs or symptoms of tuberculosis can be grouped into two classes: First, the general, and second, the localizing symptoms.

The general symptoms are usually not sharply defined and may be so slight as to escape even the notice of the patient. These general symptoms, while not so important as regards the location of the tuberculous lesion, are of the utmost importance in determining the presence of the disease.

Of the general symptoms of most importance in making an early diagnosis, I shall speak only of fever, disturbed heart action, loss of weight and cough.

Fever may precede all other symptoms in the beginning, and it is not unusual to find a patient up and about and feeling fairly comfortable whose temperature is 101 to 102 every afternoon, and some patients feel stimulated and more comfortable during their period of daily rise of temperature than at other times.

The fever is characterized by chronicity, most often reaches its highest point sometime in the afternoon, and often following a sub-normal temperature in the forenoon.

There is usually only slight constitutional disturbance from the fever.

The maximum and minimum temperatures, although variable in height and duration, usually occur at the same time each day in any individual patient.

A persistent slight elevation of temperature without apparent cause, is a very suspicious symptom, and should always be carefully investigated.

The temperature of the tuberculosis patient is very unstable and subject to variation from very slight causes; thus, slight mental excitement or physical exertion causes more rapid heart action and a rise of temperature.

Pulse: The frequency and tension of the pulse are early and often permanently changed.

The size of the pulse, its fulness and regularity are usually not much changed until the later stages.

The frequency of the pulse is nearly as important as the temperature, and in many cases far more accurate for prognosis.

Increased frequency is of great value in diagnosis, as it stands most often in direct relation to the activity of the disease and the strength of the patient.

The majority of all patients have at first a slightly increased rate (90-100), even when without fever, and frequently when at rest in bed.

The pulse rate and temperature may be independent, but more often there is a rather close relation between the two, which is often expressed by allowing 10 beats for each degree of fever.

Mental excitement, slight physical exercise, attacks of coughing, and a full meal, have a strong tendencyt to increase the rate in early as well as in advanced cases.

The tension in many cases is lowered from the very beginning of the disease, and is said by some to be present in thise predisposed to the disease.

A much greater variation exists between the blood pressure in an upright and in a reclining position than in health.

Potain believes that this hypotension can be used to differentiate a true chlorosis from the secondary aenmia of tuberculosis.

Loss of weight: Wasting has long been recognized as the symptom most characteristic of pulmonary tuberculosis, and for this reason has been popularly termed "consumption" or "phthisis."

It is the result of the disease, and usually stands in direct relation to the stage and chronicity of the disease.

Loss of weight is often the most prominent and occasionally the only symptom which would indicate tuberculosis.

It may occur so gradually as to escape the attention of the patient for some time, or it may be very rapid, even in the early stages.

The scales, with the thermometer, give usually the most reliable information concerning the progress of the patient.

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It often has periods of marked remissions in the early stages, and the patient thinks he has repeated attacks of "cold" or "bronchitis," and may give a history of repeated attacks of colds over long periods.

A summer cough is always more suspicious than a winter cough, and it is not uncommon for a patient to have his suspicions first aroused when his cough, contracted during the winter, fails to disappear when the warmer weather sets in.

A cough caused by deep breathing should always be looked upon with suspicion.

Cough, in the majority of cases is at first short, dry, hacking, not hard, and rather frequent, with usually not much expectoration.

As the disease progresses, the cough becomes looser, more frequent, and more productive.

There are many other symptoms that occur early in some cases of tuberculosis, but I consider fever, disturbed heart action, cough and loss of weight, the most important.

And any patient presenting any one or more of these symptoms, which cannot be otherwise accounted for, should be looked upon as tuberculosis, until the contrary is proven.

DISCUSSION.

Chairman Scott: In the discussion of this paper I wish to call your attention to the purpose of the subject. That was the early disagnosis of tuberculosis. We don't have much trouble making a diagnosis. In the discussion that you bring forth I hope you will discuss it freely directing your remarks to the early diagnosis and if you have anything that will help anybody you may express it now.

Dr. West: That paper was strictly to the point and is extremely valuable. There is no question at the present time concerning the curability of tuberculosis before it has advanced beyond a possibility of cure The early diagnosis is the meat of the whole matter.

INDIGESTION

From a Surgical Point of View.

LEROY LONG, M. D., M'ALESTER, OKLA.

To some of you my remarks in connection with this subject may appear to be of an elementary character. However, on account of the looseness with which we have for so long used the term "indigestion," I have felt that it might not be out of place to call attention to certain symptoms indicative of lesions of a surgical nature, when carefully and properly analyzed; to the frequency with which such symptoms are treated in a medical basis under the term "indigestion" or "dyspepsia," and to point out the necessity of surgical procedure.

The conditions to which I wish to call attention may be divided into

two classes, which I will call direct and reflex. In the former division are two conditions, namely:

1. Gastric ulcer, and,
2. Duodenal ulcer.

In the latter division there are three conditions:

1. Diseases of the gall bladder and bile ducts.
2. Chronic disease of the pancreas.
3. Chronic Appendicitis.

All these five pathological conditions produce symptoms referable to the digestive tract, and interfere with the proper process of digestion and assimilation of food.

1. Gastric Ulcer. I will not take up your time to enumerate all the symptoms. Pain immediately after meals is suspicious—pain of this character that is relieved by the administration of orthoform, or other local anesthetic, a few minutes before eating is very suspicious, as it is not likely that the orthoform would relive the pain if it were not associated with an abraded or ulcerating surface. Hemorrhage, which we so often wait for in order to clinch the diagnosis, has been recently said, by those who have had large experience, to be the least important of all the real symptoms of ulcer. The gastric contents should be analysed and studied; the condition of the patient as to loss of weight, anemia and other general conditions should be carefully invetsigated. Every case is not easy, but by painstaking work we may be able to come to a definite conclusion.

What should we advise in a case in which we have made the diagnosis of ulcer of the stomach? I have put it down as a surgical condition, for I believe it safer to proceed upon such a basis in handling these patients. That does not necessarily mean, however, that we should advise immediate operation in every case in which the diagnosis has been made. If there is not progressive loss in weight, if the pain is not so severe as to prevent the taking of sufficient nourishment, if there is not progressive anemia with accompanying general weakness, and if the patient is situated so that he may follow a strict regimen, especially as to diet, for a long time, it may be well to undertake treatment of the case by means other than surgical. We must not forget, however, that it has recently been pointed out by MacCarty and others that 71 per cent. of cancer of the stomach may be demonstrated as having been engrafted upon a pre-existing ulcer of the stomach. With this in mind we should not hesitate too long to give the patient an opportunity to get well through a gastro-enterostomy, which is the proper surgical procedure for the cure of this disease.

2. Another type of so-called indigestion has as its basis ulcer of the duodenum. Symptoms of this condition ar eusually clearly marked. The patient is often—it may be nearer the truth to say usually—an apparently healthy individual. Usually there is no loss in flesh, there may be but little or no anemia or general weakness. The one characteristic symptom is severe pain coming on some time after eating—usually from one and one-

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half to four hours afterwards, and this pain is relieved by taking food. Patients soon find this out, and frequently go to bed at night with some kind of food near them so that when they are awakened by the inevitable pain, they may eat and be relieved.

In ulcer of the duodenum, as in ulcer of the stomach, it has been pointed out by careful observers that hemorrhage is one of the least important of all the real symptoms of the disease. Unlike ulcer of the stomach, however, cancer is rarely engrafted upon it.

The treatment may be summed up in practically the same way as in gastric ulcer, except that surgical precedure does not seem to be so urgent as in the former condition for the reasons that the general health is not so frequently affected in so serious a way, and the danger of malignant change not nearly so great. However, it must not be forgotten that many cases of perforation with subsequent fatal peritonitis are reported, and ulcer of the duodenum should always be considered a surgical disease.

3. Recent investigation has demonstrated that disease of the gall bladder is responsible for many cases of so-called indigestion. The typical gall bladder attack is produced by the presence of stones in the organ. A stone engages in the cystic duct, the organ fills with serous fluid, there is sudden, agonizing pain in the epigastrium, geenrally radiating to right hypochondrium. The attack may occur in one apparently in good health. As the gall bladder distends, the contour at junction with the cystic duct changes, the stone rolls back into the bladder, the pain ceases as suddenly as it began, and the patient feels well. This is the kind of attack that is so often diagnosed as acute indigestion, or gastralgia. Again, the gall bladder may be infected after typhoid, or some enteric infective process. Inflamatory processes follow. Stones may or may not be a pre-existing condition. If they have pre-existed, it may be that the trauma caused by them makes it easier for the development of the infective process. In either case we now have a blind pouch in which the process proceeds, and in which there is poor drainoge, for the gall bladder is unable to expel its own contents. It has but little inherent contractility. If the patient weathers the acute infection, he gets on his feet with adhesions in the bile tract area, he has dull pains in this region, he belches gas after meals—sometimes vomits; he has recurrent attacks of pronounced pain, his appetite is poor, his weight is usually decreased, and he is never well entirely.

In all these conditions about the gall bladder, whether there are stones or not, there can be, to my mind, but one safe and promising procedure, and that is by doing the indicated surgical operation—usually a cholecystostomy. The operation is safe, the relief is prompt, and the patient is usually permanently relieved. Even with the best surroundings and opportunities for treatment, medication in these cases should not be the chosen procedure.

4. Chronic pancreatitis is now receiving considerable attention, and it seems to be altogether probable that this disease may explain some of

the obscure symptoms which have been ascribed to indigestion. Formerly it was thought that chronic pancreatitis was generally associated with diseases of the bile tract area, but in a recent remarkable contribution by Deaver, in which he reports seventy-three cases, attention is called to the fact that only about half the number had gall bladder or duct trouble. He further shows by an analysis of his patients that most of the cases were in the male, whereas most gall bladder cases are in the female.

In chronic pancreatitis there is generally epigastric pain, nausea and vomiting, intermittent jaundice as cardinal symptoms. In addition to these there is decrease in weight, usually, but not always, a slight rise in temperature, and constipation. Many cases are very obscure and require careful, painstaking investigation in order to arrive at a diagnosis.

The treatment is cholecystostomy in order to obtain good drainage. A practical point, therefore, is, if there is difficulty in deciding as to whether disease of the gall bladder or chronic disease of the pancreas exists, the performance of a cholecystostomy is the indicated operation in either case.

5. Chronic Appendicitis.—Notwithstanding the oft-repeated charge that the appendix is often removed when such procedure is not necessary, i believe that many cases of intractable indigestion may be traced to chronic inflammation of it. I do not believe that it is often removed when the necessity does not exist. Much more often the opposite mistake—procrastination while awaiting typical symptoms of appendicitic—is made. Every surgeon has seen the marked improvement in cases of long continued indigestion with loss of weight and strength after the removal of an appendix which presented almost a normal gross appearance on the outisde, but which, when it was incised, showed thickened, indurated walls, a stricture or an ulcer.

In conclusion, let me plead for a more careful analysis of the cases presenting symptoms of indigestion. Let us remember that in many of these patients—perhaps in the majority of them—digestive ferments and other internal medication will not relieve or cure. Let us remember that in an equal number the necessary surgical operation, properly done, will give radical relief.

DISCUSSION.

D. Walker, Shawnee—Dr. Long's paper is too good to pass over without discussion. The compilation the doctor has mentioned is the old list we have had to deal with in our cases of chronic indigestion. These terms are mostly eliminated now by our present method of treatment of indigestion. We have used numerous things to give people for indigestion; pepsin, etc. Now we look more carefully to the cause of the trouble. We use to give patients different things, treating them for neuralgia, gastralgia, etc., of the stomach. Now we know that if the trouble is with the gall bladder it would be quite useless to give him pepsin. We must be sure where the trouble is before we prescribe.

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Dr. W. E. Dicken, Oklahoma City—I think the doctor's paper was one that struck the keynote of all our stomach trouble. There are really only two things that cause stomach trouble, one is ulcer or carcinoma, the others are reflex. The diagnosis of one is very simple. If the patient has stomach trouble and is relieved by eating, he has duodenal ulcer of the stomach, whether or not he has hemorrhage. How important to care for this promptly when we know that fifty (50) per cent of ulcers of the stomach result in cancer of the stomach.

The liver secretes as much bile as the kidneys secrete urine. The gall bladder is only a safety valve. In case more bile is secreted than necessary it is held back in reserve by the gall bladder. Now, if the duct to the gall bladder is forced back into the pancreas, and we have pancreatitis It becomes important to relieve the gall bladder, not only for the sake of our stomach trouble, but also to remove the danger of pancreatitis.

Dr. E. H. Troy, McAlester—This paper is so complete in itself that it is difficult to discuss it without repeating what is said in the paper.

Dr. White, Muskogee—I do not think that pain shortly after eating will always permit us to make a diagnosis of ulcer.

Dr. White also reported a case.

Dr. Long, closing—It was not contemplated to point out all the symptoms of gastric ulcer, nor would I think it wise to operate on the few symptoms pointed out. I can see very readily how hyperchlorhydria might cause pain.

I don't want you to think for a moment that I advised operation on the few symptoms I pointed out. We must be thoroughly satisfied that an operation is necessary. Sometimes it is necessary to do an exploratory operation. We should advise the patient why it is necessary to do this.

In case of duodenal ulcer we have little pain. In gastric ulcer we have pain very quickly after eating.

I thank you.

MISCELLANEOUS.

PITTSBURG COUNTY SOCIETY AND DR. WILEY.

Whereas, The Congress is now investigating the conduct of Dr. Wiley, charged with commiting a techinal error in an effort to secure efficient service for the department he represents, and

Whereas, It is our opinion, in common with that held by members of the medical profession generally, that Dr. Wiley is guilty of no deliberate wrong, and that his act in this instance, as in every instance of his official

life, was for the purpose of securing the best results for the whole people, and

Whereas, Dr. Wiley has given evidence in every act of his official life that he is not only honest, but a man of the very highest ability and courage, and peculiarly adapted to the successful prosecution of the duties of his office.

Therefore, believing that his retirement from his office at this time would be nothing less than a public calamity;

Be It Resolved, That we, the members of the Pittsburg County Medical Society, strongly urge the President of the United States, and all other officials interested, to not only retain Dr. Wiley, but to give him more authority in conducting the affairs of his office, firmly believing that such a course will meet the approval of all right thinking people and result in great good to all.

Signed,

T. J. LONG, M. D.
M. C. WILSON, M. D.
WM. FOWLER, M. D.
Committee.

PROSTATECTOMY

E. S. Judd, Rochester, Minn. (Journal A. M. A., August 5), gives an analysis of all the cases of prostatectomy operated on previous to April 1, 1911, in St. Mary's Hospital, Rochester, including 461 operations for benign hypertrophy, seventy-four for cancer, and seven for tuberculosis. Cancer and hypertrophy were noticed together in several cases. No specific etiologic factors were determined in these cases and the conditions calling for operation weer twice as frequent in country dwellers as in those living in the city and only a small percentage had had specific infection. The majority were operated on between the ages of 60 and 70 years. Only eleven were under 45, and fifteen were over 80. Four hundrd and seventeen of the 542 patients were married, ninety-four were widowers and nineteen were single. The average duration of symptoms before operation was 5.96 years. The aim was to operate on patients whose symptoms were dependent only on prostatic enlargement, but it was not always easy to determine this point. If only a slight amount of residual urine is found in the bladder by catheterization in a case having marked secondary symptoms without great difficulty in voiding little benefit can be expected from operation, which will be accompanied, moreover, with great risk. On the other hand, if a large amount of residual urine is obtained with the catheter (and atony is excluded) the case is one for prostatectomy, even though the tumor is small. In late years the mortality in the hospital has been materially reduced and better convalescence obtained by spending a little more time in preparing patients for operation. With a permanent catheter in the ureter

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or through a suprapubic stab-wound the patient is in the same condition as after an operation so far as emptying the bladder is concerned. The secondary symptoms are relieved and the general health can be built up. The specific gravity becomes lower and operation should not be performed until it has risen again, which may take several weeks. As a rule, the Rochester surgeons do not consider it advisable, if the symptoms are slight and only two or three ounces of residual urine are found, to operate. Within the last five years they have used the cytoscope to great advantage in ninety-five per cent. of the cases in determining the presence of stone and selecting the type of operation. The perineal operation is the one ordinarily chosen, but the cystoscope may show conditions calling for a suprapubic operation. The mortality is not especially affected by the type of procedure. The suprapubic sinus as a rule is slower in healing but is less likely to be followed by painful complication. They have been able to trace 90 per cent. of their patients and nearly all of them report they rae absolutely free from pain. In seventy-four cases of carcinoma the immediate results have been quite as good as in benign cases but, in such, operation should be advised only when obstruction and bladder symptoms exist. Several of the cancer patients are still alive after more than two years. Of the eighty-one operative patients who have died since leaving the hospital, thirty had carcinoma, and twenty are reported as having been well for some time and then dying of other trouble. Twenty-nine died from kidney lesions before the end of the second month and in nearly all of them the autopsy showed evidence of old nephritis with new nephritis superimposed. These patients, it would appear, had already had some sort of interference in kidney function before operation. The preliminary treatment is considered as the most important factor in the good results obtained during the past few years. By the use of the permanent catheter before operation in suitable cases they have been able to eliminate a considerable percentage of mortality from kidney disease.

THE ETHER RAUSCH.

In some text-books on surgery attention is called a brief primary anesthesia occurring with the use of chloroform and ether. W. T. Coughlin, St. Louis (Journal A. M. A., July 1), calls attention to the utilization of this brief general nesthesit in very short operations, and describes it, as practiced by Professor Lindner in Dresden, who had used it at the time for more than 5,000 times. The patient was placed on the table as for an ordinary anesthetic. "All instruments, drains and dressings, etc., likely to be used were ready and close at hand. All those present were required to be silent. The anesthetist took the mask—a large wire affair, such a one as that shown in the illustrations—and showed it to the patient, told the latter what was to be done and admonished him to have no anxiety or alarm, explaining that the only unpleasant feature was the smell of the ether. The patient was asked to raise his arme and to keep it raised as long as he could. Meanwhile the pad at the bottom of the mask was saturated with ether, the mask was placed

in position and the patient was told to breathe deeply. At about the twelfth inhalation the arm wavered and began to fall; the mask was removed and at once the operation was begun and quickly finished." This method has been used by him since, at the Washington University Hospital, with great success, for over two years and in over 200 cases. It can be given in a variety of ways without any special appliance. The thing to be remembered is that the ether must be administered with very little air. Coughlin objects to the use of the open mask because with it it is fifficult to say when primary anesthesia has been induced and nausea may occur, which he has never seen with the ether "rausch." He recommends its use in all minor surgical operations which can be better done without causing pain. He has used it in opening abcesses, setting fractures, reducing dislocations, removing ingrown toenails, etc., etc. He would not employ it in chronic bronchitis, emphysema, marked arteriosclerosis, nor generally in disease of the pulmonary or cardiovascular system. He would not use it also in cases requiring more than five minutes' operation, or where general relaxation is necessary, or in case of pale, flabby children, where one fears to meet the "status lymphaticflus."

SURGICAL OPERATIONS AND OBLIGATIONS.

In his chairman's address before the section on Obstetrics and Diseases of Women of the American Medical Association at its Los Angeles meeting, H. G. Wetherill, Denver (Journal A. M. A., July 8), takes up the subject of the responsibilities and opportunities of the gynecological surgeon. Surgery, he says, must be regarded as a choice of evils, and in recommending operation the surgeon must take account of the possibilities of benefit as justifying the the probable or known risks and the temporary or permanent disability that will be its consequence, and also the expense. Operations on neurasthenic and nervous invalids call particularly for the nicest surgical judgment and caution. The menace to modern obstetrics, gynecologic and abdominal surgery is the horde of self-trained individuals who have invaded the field and a service of reasonable duration as an assistant to an experienced surgeon and the broadening influence of years of general practice should be a prerequisite. He also speaks of the evils and possible abuses that come from the opening of hospitals to all sorts of practitioners and says that, while at least one-half the hospitals in this country are controlled by churches, unwarranted and even criminal operations are frequently performed within their walls. For this reason he pleads for rigid supervision and control and careful selection of those who are to have hospital privileges. Character should be among the most important qualifications as well as skill and competence otherwise. The proper organization of hospitals and co-operation of the physician and the management are also essentials on which he dwells and the importance of proper selection of the assistants and especially of the anestheist, is emphasized. He has called attention before to the fearful abuse of so-called hypodermic stimulation during and after operations, and says that, with the reforms which he advocates it would rarely be needed or practiced. It should be the

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Section on Obstetrics, Gynecology and Abdominal Surgery. The gynecologist muse become a good abdominal operator, but he deplores the breaking down of the boundaries between this specialty and general surgery. Prolonged general surgical training does not tend to produce a skilled obstetician and gynecologist, who knows just when to operate and when to abstain from operating. Operators, he says, are far too numerous, pathologists and diagnosticians far too few.

EARLY PULMONARY TUBERCULOSIS.

The too general failure of the medical profession to diagnose the early stages of active tuberculosis is made the subject of criticism by W. W. Brem, Cristobal, Canal Zone (Journal A. M. A., June 3), who says that the conclusion is unavoidable that the mass of the medical profession is delinquent in this regard. It is probable, he thinks, that the infection, if recognized and treated early could be arrested in most cases of tuberculosis. Such early diagnosis is possible, he maintains, even though the obvious symptoms may not be present and the patient appears only as a mild neurasthenic. The temperature obserbations in such cases would be very useful. It is important that the physician should thoroughly know the normal chest, and Brem notes particularly one or two slight abnormalities, such as a slightly louder breath sound in the left base and small areas of harsh breathing due, he believes, to approach of the relatively large bronchi to the surface and the thinness of muscle covering on these spots. The location of progressive tuberculosis is generally at the apex and one may see in the early stage slight drooping of one shoulder with wasting of the shoulder-girdle muscles, most significant one the right in a right-handed individual, or on the left in left-handed ones. The early physical changes, as shown by palpitation, percussion and auscultation, are described in some detail. In the latter it is of the first importance that the patient should breathe properly when auscultated. Brem's experience with the strong cutaneous and conjunctival tuberculin tests conincides with that of Hamman and Wolman. That is that the conjunctival test with 1 per cent. old tuberculin is safe when the proper care is exercised; that when it is positive together with suspicious symptoms or signs, the patient should be treated for tuberculosis; when it is positive without symptoms or signs, close medical supervision will be sufficient, and when the test is negative the result is not of great significance. Radiography in the hands of an expert is a valuable procedure for early diagnosis and most helpful in the ronfirmation of diagnosis by other methods and in indicating the extent of the disease. It cannot, however, supplant other methods. The combinations of symptoms which he has most frequently observed in an early case are: first, a persistent slight cough with or without a little morning mucorpurulent expectoration, and with an afternoon temperature of from 99 to 99.5F. Rest in the hospital usually causes the fever to subside within a week. There is generally a slightly shortened high-pitch percussion note in the supraclavicular or in-

traclavicular or upper interscapular regions, and the apical outlines are a little narrowed on the affected side. The second group of patients feel run down and nervous, lack appetite and sleep badly. There may be no cough, expectoration or fever, but they have usually lost a little weight and the physical signs are generally like those of the first group. In the third group the onset is with a pleurisy, dry or otherwise, and usually with fever. The two conditions that are apt to cause confusion are influenza and neurasthenit. In the former the presence of influenza bacilli and absence of tuberculous ones, with the other tests, should clear up the diagnosis. Neurasthenit, Brem says, should never be diagnosed without testing for tuberculosis. As tuberculosis is one of the commonest of all fatal diseases, it should be early diagnosed, and our hope of its ultimate eradication or control lies in the education of physicians and their attention to this point.

A PROMISING AGENT IN HAY FEVER.

Dr. J. E. Alberts, of The Haugue, Holland, undoubtedly performed an important service when he directed the attention of the medical profession to his new combination for the treatment of vasomotor rhinitis. We refer to the combination now known as Anesthone Cream, which has heretofore been briefly noticed in these pages, and which contains one part of adrenalin chloride to twenty thousand (1:20,000), and ten per cent. of para-amido-ethyl-benzoate, and is marketed in the form of an ointment.

Applied to the mucous membrane of the nares, Anesthone Cream has a persistent anesthetic effect, which affords marked relief in hay fever. As para-amido-ethyl-benzoate is only slightly soluble in aqueous fluids, its anesthetic action is prolonged. It does not have the poisonous effect of cocaine upon the protoplasmic element of cells, nor does it depress the heart. Furthermore, there is no tendency to "habit" acquirement.

The preparation came into considerable use during the hay-fever season of last year, the consensus of opinion being that it affords a very practical and satisfactory means of relief from symptoms due to hyperesthesia of the nasal mucous membrane, and without ill effects—an important consideration. The fact that the relief continues for several hours in some cases is worth remembering in view of the fleeting effect of most local anesthetics.

Anesthone Cream is supplied in a collapsible tube with an elongated nozzle to facilitate its application to the nasal mucosa, a portion of the cream about the size of a pea being applied three or four times a day, as may be necessary. It is market by Parke, Davis & Co. Whether, as an agent in the treatment of hay fever, it will attain the vogue reached by some other preparations put out by the same company—notably Adrenalin Chloride Solution and Adrenalin Inhalent, which have been before the medical profession for a number of years and thus have the advantage which pertains to priority—remains to be seen. At any rate it is worthy of a fair chance, which, of course, in the long run it is certain to get.

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IOWA STATE MEDICAL ASSOCIATION BEGINS PUBLICATION OF JOURNAL.

Volume 1, Number 1, of the Jounral of the Iowa State Medical Association, with Dr. D. S. Fairchild,, Clinton, editor, and Dr. C. A. Boice, Washington, assistant editor, has been received.

Steadily and surely each state medical organization is entering the field with its own publication and we hasten to welcome this new one and wish for the Journal every success attainable.

STATE BOARD OF MEDICAL EXAMINERS JULY EXAMINATION REPORT

Name	School of Graduation	Year		%	Address
Blair Points,	Oklahoma Univ. Med. Dept.	1911	R	83	Okla. City.
Ralph S. Faris,	Hahneman Med. (Chicago)	"	H	85	Halfway, Tex.
Robt. E. Jameson,	American School Osteo.	1901	O	74	Perry, Okla.
G. C. Wallis,	American School Osteo.	1911	O	82	Poplar Bluffs, Ark.
E. A. Donaven,	University Med. Col. (K. C.)	1897	R	80	Pryor, Okla.
F. A. Detrick,	Medico. Chirug. (Philadelphia)	1903	R	81	Agra, Okla.
F. R. First,	University Med. Col. (K. C.)	1911	R	82	Stillwater, Okla.
W. T. Dardis,	University of Oklahoma	"	R	74	Okla. City.
M. H. Foster,	Vanderbilt University	1910	R	91	Oktaha.
J. A. Mullins,	University of Oklahoma	1911	R	82	Okla. City.
E. B. Thomasson,	Ft. Worth University	"	R	84	Hastings.
J. S. Jacoby,	Atlanta Col. P. & S.	1910	R	77	Okla. City.
Levi Murray,	Barnes	1911	R	76	Depew.
H. G. Crawford,	University of Nashville	"	R	87	Depew.
J. W. Ellis,	Col. P. & S. (Little Rock)	"	R	80	Little Rock, Ark.
T. O. Crawford,	Col. M. & S. (Denver)	1910	R	84	Beggs.
Elmer E. Darnell,	University of Oklahoma	1911	R	87	Foss.
E. W. Cavpness,	University of Texas	1910	R	89	Chickasha.
E. P. Allen,	University of Texas	1911	R	85	
V. M. Wallace,	University of Oklahoma	"	R	78	Gerty.
Walter B. Adams,	University of Oklahoma	"	R	76	Okla. City.
L. L. Patterson,	University of Oklahoma	"	R	80	Okla. City.
J. R. McLauchlin,	University of Oklahoma	"	R	84	Norman.
L. B. Torrance,	Col. P. & S. (St. Louis)	1909	R	79	Okmulgee.
F. J. Wikliemeyer,	Harvard University	"	R	75	Muskogee.
Roscoe Walker,	University of Columbia	1911	R	79	Norman.
Elizabeth Whitaker,	Herring Medical College	1909	H	87	Avant.
U. G. Hall,	University Med. Col. (K. C.)	1911	R	77	Wann.
Chas. R Dever,	Ensworth Medical College	"	R	71	St. Joseph, Mo.
W. H. Smith,	American Medical College	1894	E	88	Waurika.
E. F. Bungardt,	University Med. Col. (K. C.)	1911	R	75	Kansas City, Mo.
J. C. Jenkins,	Med. Chirg. (Philadelphia)	"	R	76	Chicago.
H. W. Houg,	Missouri University	1908	R	85	Guthrie.
Wm. L. Moore,	Col. P. & S. (Little Rock)	1911	R	72	Dierks, Ark.
C. E. Clymer,	St. Louis University	1910	R	80	El Reno.
L. D. Hudson,	University of Nashville	1909	R	84	Copan.
Rex G. Bolend,	St. Louis University	1911	R	82	Okla. City.
T. E. Childress,	American School Osteo.	"	O	79	Nowata.
F. W. B. Rockett,	Baylor University	"	R	75	Swink.
Wm. B. Newton,	Chicago Col. M. & S.	"	R	87	Muskogee.

Owen C. Northup,	Col. P. & S. (St. Louis)	"	R	80	Blackwell.
C. A. Howell,	Tulane University	"	R	87	Okla. City.
J. A. Taylor,	Meharry Medical College	1908	R	70	Scott, Ark.
John P. Lorenz,	Col. P. & S. (St. Louis)	1911	R	71	Eufaula.
Thos. D. Hurley,	University of Arkansas	"	R	88	Pawhuska.
Leroy T. Waller,	Louisville Medical College	1906	R	77	Ryan.
Rufus L. Holt,	Vanderbilt	1911	R	90	Mangum.
Calvin B. Chambers,	Meharry Medical College	1909	R	72	Wagoner.
Richard A. Dodson,	Meharry Medical College	1909	R	73	Anadarko.
Isaac W. Young,	Flint Medical College	1900	R	79	Boley.
Earl H. Toole,	Homeo. Med. Col. Chicago	1897	H	81	Muskogee.

THOSE WHO FAILED

No.	College	Year	%
1	Tennessee Medical College	1905	66
4	University of Oklahoma	1911	76
5	University of Arkansas	"	59
9	American School Osteo.	"	76
10	American School Osteo.	"	72
18	Meharry Medical College	"	74
21	Col. P. & S., Little Rock	"	46
23	Memphis Hos. Med. Col.	"	77
26	University of Oklahoma	"	67
35	Ensworth Medical College	"	71
55	Chicago Col. P. & S.	1889	70
44	University of Nashville	1893	71
48	University of Arkansas	1911	72
50	Col. P. &. S., Little Rock	1908	59
35	Flint Medical College	1911	67
56	University of W. Tennessee	1910	68
58	University of W. Tennessee	1911	70
50	Meharry Medical College	1907	69
62	Illinois Medical College	1911	46
66	Leonard Medical College	"	69
68	Louisville Medical College	1881	70
69	Keokuk Medical College	1903	59

Two men made the Honor Roll:
M. H. Foster of Vanderbilt Medical College, Average of 91 per cent.
Rufus L. Holt of Vanderbilt Medical College, Average of 90 per cent.

BOOK REVIEWS.

DIAGNOSTIC METHODS. Second edition revised. A treatise on Diagnostic Methods of Examination. By Prof. Dr. Hermann Sahli, Director of the Medical Clinic, University of Bern. Edited, with additions, by Nathaniel Bowditch Potter, M. D., Assistant Professor of Clinical Medicine, College of Physicians and Surgeons, New York. Octavo of 1229 pages, containing 472 illustrations; 1911. Cloth $6.50 net, half morroeco, $8.00 net. W. B. Saunders Company, Philadelphia and London.

This work is one of the largest on the subject of diagnosis ever brought into one volume, probably; it covers 1229 pages including the index and

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would probably be considered more convenient if divided into two volumes.

When it is understood that it is the second edition of the translation of the fifth German elition its popularity will be appreciated.

As to scope covered, ninety-two pages are devoted to the pulse, blood pressure, arterial tension and the various types of blood pressure determining apparatus, and 169 to percussion in general, topographic lines, palpation, inspection, the necessary and varied types of instruments used in diagnosis of heart and chest affections.

The work contains an immense reference to the detection of the various abnormalities of the body fluids, chapters on microscopic examination of sputum, on examination of the abdomen, intestines, feces, and of the intestinal functions; chapters on the examination of esophageal, laryngeal, bronchial and rhinological conditions and special chapters on the diseases of nervous origin as well as chapters on the nerves of special sense and observations on cerebral localization.

The scope covered is wider than that of any similar book to the writer's knowledge.

It is stated that the work is not a compilation from various sources, but a statement of the author's observations and methods in the field of diagnosis.

WHAT TO EAT AND WHY. By G. Carroll Smith, M. D., of Boston, Mass. Octavo of 310 pages. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $2.50 net.

This is a plain well written book on "What to Eat and Why," and the text follows the indications of the title closely in the avoidance of difficult formula, chemical combinations and derivations and adheres closely to the practical side of the dietetic question.

For these reasons the book will be most acceptable to the practitioner who has no time to inquire into the why and wherefores of dietary matters, but wishes an easily accessible and reliable authority for consultation.

The book is very practical in its application of dietary conditions and thus has a distinct value in its field.

BOOKS RECEIVED.

THE PRACTICAL MEDICINE SERIES—OBSTETRICS, VOLUME IV., edited by Joseph B. DeLee, A. M., M. D., Professor of Obstetrics, Northwestern University Medical Schol, with the collaboration of Herbert M. Stowe, M. D. Series 1911, Cheago. Bound in cloth, price $1.25. The Year Book Publishers, 180 North Dearborn Street.

TRANSACTIONS OF THE FLORIDA MEDICAL ASSOCIATION FOR THE YEAR 1911, held at Tallahassee, Florida, May 10, 11, 12, 1911.

HEIRONYMUS FRACASTOR'S SYPHILIS, FROM THE ORIGINAL LATIN. A translation in prose of Fracastor's immortal poem. Printed on

hand-made imported paper; library binding. Crown octavo. The Philmar Company, Medical Publishers, Fidelity Building, St. Louis, Mo. Price $2.00.

PRACTICAL MEDICINE SERIES. GYNECOLOGY. VOLUME IV. Edited by Emilius C. Dudley, A. M., M. D., Professor of Gynecology, Northwestern University, Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago; and C. Von Bachelle, M. S., M. D., Aassistant Professor Obstetrics, Chicago Policlinic and College of Physicians and Surgeons; Gynecologist to the German Hospital, Chicago. Series 1991. Cloth, $1.25. Chicago, The Year Book Publishers, 180 North Dearborn street.

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REVISION OF ROSTER TO AUGUST 1, 1911.

(Names preceded by * were paid up and in good standing at the time of the annual meeting and were accidentally omitted or placed in wrong county list in making up the roster of members for the June issue.) Other names have been added since making the June roster.

Name	Residence	County
*Rollins, J. W.	Atoka	Atoka-Coal
Jackman, F. M.	Mead	Bryan
McCalib, D. C.	Utica	Bryan
Pate, J. D.	Durant	Bryan
Stringer, O. E.	Achille	Bryan
Barnwell, J. T.	Graham	Carter
Miller, G. E.	White Oak	Craig
*Bolton, W. D.	Clinton	Custer
Shaunty, J. N.	Carrier	Garfield
Gray, A. W.	Pauls Valley	Garvin
*Markham, H. P.	Pauls Valley	Garvin
Struble, Andrew	Pauls Valley	Garvin
Taylor, J. I.	Robberson	Garvin
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Lett, L. M.	Dustin	Hughes
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